

and left in perfect order for the next day. The nurses are employed in the department for a period of three months only—for the work is very trying on account of the constant watching necessary to focus the rays and keep them on the exact spot, and because of the long sitting in one position, as well as from the monotonous nature of the work itself.

Two sisters are in charge of the department. They superintend the work and dressings, besides teaching the probationers.

The French lamps are a modification of those used by MM. Lortet and Genoud, of Lyons, and they are much simpler in construction than the Finsen lamps. They consist of a pressure-glass fixed into a double metal shield, through which there is a continual flow of cold water. The carbons are placed immediately behind the lens and the affected part pressed firmly against it; by this means the light is brought so near the skin that an exposure of from fifteen to thirty minutes is all that is necessary to produce a reaction.

Sun treatment has been abandoned at the London Hospital. Among the fogs and clouds and changeable weather of an English climate, sunlight for long is too rare a thing to be counted on, and the necessity of a retreat from the open air to the electric lamps indoors, occurring often even on summer days, has made it impracticable.

Considerably over two hundred patients are under treatment at the present time and, in spite of the fact that similar departments have been started at other hospitals, two hundred and fifty applicants are waiting for admission, with a hope, which seems now well founded, of a permanent cure.

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## IVY POISONING: WITH REPORT OF A CASE

By RUTH BREWSTER SHERMAN

Graduate Nurse of Johns Hopkins Hospital

It fell to me to treat this case without a physician, because in my Southern home, where so much life is spent out-of-doors and vegetation is rank, ivy poisoning is a yearly emergency familiar to all. My patient was a girl of seventeen (usually well-nourished and healthy, but at this time rather anæmic and run-down), who took a leaf of common poison ivy away from a younger child, using her right hand, and immediately after washed her own hands and face in running water. Twelve hours later an outbreak of poison appeared over the face, neck, and hands (being particularly severe on the right) and a little later on the feet, evidently carried by the hands. The younger girl was not affected.

The patient was put to bed, isolated, and the usual treatment

begun,—bathing the affected parts with solution of sugar of lead (lead acetate), with the addition of laudanum. This usually effectual measure failed to relieve, and served to heighten the irritation until it was unbearable. I then began using a solution of

Water, Oiii;  
Fifty per cent. alcohol, ℥i-ii;  
Witch-hazel, ℥i;  
Ammonia, ℥i,

giving an entire bath twice (often three times) daily, and to the face and hands as often as desired, using a fresh, soft seasponge, antiseptically treated, and a little sulphur soap. Immediate comfort and relief were experienced, experiment proving the witch-hazel to be the chief alleviating agent. Blisters were punctured as fast as they formed, and the secretion was wiped away with fifty per cent. alcohol. Talcum powder was freely used on the face.

By these means the eruption soon left the feet and appeared nowhere on the body, but the affection of face and hands was extreme. The room was kept dark, the diet was soft or very light, the kidneys kept active, and the bowels open by broken doses of Glauber's salts given overnight. An antiseptic mouth-wash was used and the lips kept well moistened with glycerine, with the result that these suffered much less than in an average attack. Different beds and linen were used for day and night to allow frequent airing. Ice compresses were given for headache, trional and acetanilid for sleeplessness on account of pain; there was no fever. The patient got up on the fifth day, the swelling being much diminished. The skin regained its normal condition slowly, the right hand requiring treatment with compresses (laudanum and alcoholic solution of lead acetate) for ten days longer.

This young girl is very susceptible to ivy poison and has an attack of greater or less severity nearly every summer. The reported case appeared to be as bad as any she has ever had. In justification of my treatment, I should like to add that when she rejoined the family life she remarked that she had "never gone through a siege of poison so *comparatively comfortably* before."

The poison ivy (*Rhus radicans*; *Rhus toxicodendron*) bears many names—in New England, black mercury, markry, markweed, and pickry; in the Middle and Southern States, poison-vine, three-leaved ivy, poison creeper, and poison oak, this last being the most common name, although the true poison oak is not native east of the Rocky Mountains. It is a climbing or trailing plant, seldom standing erect, and is found almost everywhere in the country—along fences and walls,

over old buildings, on trees and bushes, in crevices of rocks, along watercourses, by roadsides, and sometimes, though seldom, in cleared land from seeds carried by birds, its domain extending over nearly the whole United States. It is a graceful vine with a strong, brown, hairy stem; bright green leaves (sometimes divided in three points but more often smooth-edged or slightly notched) growing in clusters of three on a slender branch from the main stem; the flowers small,



*Rhus radicans* (climbing variety): *a*, stem; *b*, fruit. One-fourth natural size.

greenish-white, appearing in June; the fruit a bunch of little white, waxy berries, which remain late in the fall. The foliage does not often change color, but the younger and smaller plants growing in exposed places do sometimes turn russet or crimson as early as the middle of August, and when they do the attractive color and habit of growth lead to much careless plucking and handling, especially by children or city visitors in the country. The ivy in its whole appearance and habit so closely resembles the Virginia creeper that one is often cultivated for the other, while an attempt to root out the evil often leads to destruc-

tion of the good; but there are four points of difference apparent to even the unlearned,—the leaves of the Virginia creeper grow in clusters of *five* in the mature whorl (there are sometimes only three on the very



*Rhus toxicodendron* (trailing variety). One-half natural size.

young or abortive tendrils), while those of the poison ivy are always in *three*; the ivy turns red but seldom, the creeper practically always; the berries, which cling late in the autumn, are whitish on the ivy and

black, or nearly so, on the other; while the stem of the dried or dead poisonous plant retains the hairs which are absent from the stem of its harmless and beautiful neighbor.

Contraction of the poison is accomplished by many means other than direct handling of the plant. Where the ivy has its roots in the banks of streams and its leaves hanging over or into the water, the water will often poison a person far down stream from the vine. People have been known to take poison by driving or walking past the ivy when it was loaded with dew, while farmers and workmen often have it in its severest form from exposure to the smoke of the burning plants when clearing new land, burning old brush-piles, etc., during February and



Leaves of the Virginia Creeper. One-half natural size.

March, when the ivy has long been dead. Authorities as well as the laity differ in opinion as to the influence of the sun's rays: Gray's "Botany" says, "Even the effluvium is often dangerous when the sun is shining on the vine," while Mrs. Dana, in "How to Know the Wild-Flowers," states that it is "reputed to be especially harmful during the night, or at any time in early summer when the sun is not shining upon it."

Various opinions have been held as to the identity of the poisonous quality in the ivy. Many people suppose it to be the pollen; while it has been stated in print at least once\* that "the plant contains no active poison, but it seems to be certain that it nourishes deadly bacilli which enter the pores of the skin and give the affected parts their characteristic appearance." But we are bound to believe that the truth has

\* The *Anaconda Standard* (Montana), in a quotation credited to the *Montreal Witness*, autumn of 1901.

been reached by Professor Pfaff, of the Harvard Medical School, who several years ago demonstrated that the poison is a non-volatile oil which exists in every part of the plant, even after long drying. Being an oil, it is insoluble in water but soluble in alcohol, which explains why solution of sugar of lead in water, as often used, has little good effect, that made with fifty per cent. alcohol being much more curative and more soothing.\* It also explains why water spreads the poison instead of removing it, as in the case quoted at the beginning, where the eruption appeared over all the surface which had been washed, although the water was from a running brook, giving opportunity for free change. In Mr. V. K. Chestnut's monograph, "Thirty Poisonous Plants of the United States" (page 20), is an account of experiments which prove that the oil is not carried through the body by the blood, but depends on contact of part with part. Bed and body linen, dishes, articles handled by the patient, and especially washcloths and towels, may be fruitful means of its communication and should be well disinfected. Susceptible people often have worse attacks than those from whom they took the disease, either by personal contact or by less direct means. A great many individuals are naturally immune from the effects of the ivy; and such persons, especially children, often deliberately crush or even chew the leaves to prove their own safety; but such folly should be strictly forbidden on account of later contact with others, since some of the severest attacks result from the touch of immune persons who have been exposed. The immune should hold themselves responsible for the destruction of the ivy wherever found, and also for the care of the poisoned members in a household, but they should wipe the hands carefully with fifty per cent. alcohol after any such service and be careful with their garments.†

The attack begins from twelve to forty-eight hours after exposure, with itching and redness of the skin. Small, whitish papules appear, quickly followed by general reddish-purple color of the skin, intense burning, itching, pain in the parts, and swelling, which in its worst stages prevents movement of the fingers and toes and obscures all indi-

\* Stronger forms of alcohol are found to be too irritating.

† It would appear, from all we know, that the term "volatile" is not to be understood in this connection in the sense of "passing through the air," but in its alternate meaning, "capable of wasting away." Certainly the oil does not *entirely* waste away, since it is still active in a plant long dead. No one fears an eruption from mere *nearness* to a dry plant. But that much poisonous matter is given off from the healthy ivies at times when the air is loaded with moisture, when the sunshine is bright, and during the heavy, hot "dogdays" when the leaves are full and glistening with sap, no country dweller will for a moment allow to be doubted.

viduality of the face, entirely closing the eyes and stiffening the lips, which often reach nearly an inch in thickness and are usually covered with a hard, scaling, yellow crust over the surface of the mucous membrane. Dizziness, headache, and pain in the eyes are usual, but there seem to be no symptoms from the stomach or even inside the mouth, which would indicate that the saliva neutralizes the poison, as there is ample chance for communication from the lips in eating, either before or after the eruption appears. The appetite is always good for any food which the condition of the lips will allow to be taken. The pulse and respiration are not changed, in my observation; as for the temperature, I have no information. Large blisters soon form on the affected parts, which are relieved by pricking, but the exudate is so gummy that the punctures do not remain open more than a few moments, and the skin must be either clipped or pierced again and again to obtain any good result. It is noticeable that the fluid seeks the lowest level and quickly collects in any part held *down*. I know of one case where the patient did not go to bed during a very bad attack of poison, but walked about constantly, with the result that a sac holding apparently a pint of fluid formed on the pelvis and hung down the inner side of the thigh. The physician advised against opening the sac, and it slowly diminished under long and painstaking treatment, so that the exact amount and nature of its contents were not learned. As the blisters subside they become dry, whitish-yellow patches on the dry, hard, stiff, thick-feeling skin,—often the largest peel off entirely, leaving raw, red surfaces; at this stage the flesh has a slight fetid odor, rather like that sometimes present with measles. From observation I should say that an average case reaches its worst on the third or fourth day after the onset; the symptoms begin to lessen about the fifth or sixth day, and recovery is fairly complete at the end of a week or a little more; but I have seen longer attacks, and have had an account from one nurse of a case where the patient—a young physician—was kept in bed for a month; and from two others, of patients whose eruption from a single exposure continued, though not severely, for three and four months respectively. I have also heard several accounts of persons who after one attack had repeated slight attacks over the same surface of the body, in successive years, without another exposure; but when one considers the presence of the ivy in all parts of the Union, its frequency within our cities themselves, and the certainty of its communication by clothing and by the persons of immune people, we may be pardoned for waiting for more absolute proof of this. There is considerable languor for several days after the first getting up.

It is not surprising that such a universal malady should have called

out modes of treatment as various as the circumstances of the sufferers, or that we should find all the three natural kingdoms paying tribute to this one small vegetable tyrant. The following remedies have been gathered from many sources, and undoubtedly each has been tested by experience, though the collector cannot speak personally for the value of all:

Saturated solution lead acetate in fifty per cent. alcohol, with addition of witch-hazel or laudanum.

Saturated solution of salt or baking-soda, or both, in warm water.

Powdered alum; one-half ounce in one pint of warm milk.

Weak ammonia water.

Carbonate or sulphite of soda or chlorinated soda; one ounce to half-pint water.

Glycerite of carbolic; one ounce to half-pint water.

Creolin in two per cent. solution.

Subsulphate of iron dropped into the broken blister.

Zinc ointment.

Benzoin ointment.

Phenol sodique; one-half ounce in three ounces water.

Extract of serpentaria, painted over the blister.

Tea of sassafras or oak bark; two ounces of bark to one pint water.

The natural juices of the *Impatiens fulva*, the common "jewel weed," "silver leaf," or "spotted touch-me-not" of our marshes and stream banks.

Tea of green poke-weed root.\*

Buttermilk.†

Government reports state that in some towns and suburbs poison ivy is being cultivated in private grounds for its beauty. Whether this is done through carelessness or ignorance, it is an abuse which any better-informed person can easily bring to the attention of those who have it in charge without the adoption of legal measures compelling its destruction, which has been advocated. Once convinced of its harmful qualities, a householder will be scarcely more willing to have a poisonous plant in his yard than poisoned food on his table. And the ease with which the eruption can usually be diagnosed and treated at home should not lessen our appreciation of the severity which it sometimes attains. Proof of this occurred recently in a Southern town, where a successful

\* The lady reporting this method writes: "This was recommended by one who has used it for years. I cut the root in small pieces and boiled for about an hour; when strained it was a light-brown color. I kept my arms wrapped in cloths wet with this: it increased the itching and swelled the small poison-spots to great welts which were bright red. But it cured my arms in two or three days and they have never been poisoned since."

† These are all, of course, external applications; the free use of purgative salts is always urged. I have been told of a homœopathic tablet, "*Rhus Toxicodendron*," recommended as an internal medicine for ivy poisoning; but in the homœopathic circular in my possession the drug "*Rhus Tox.*" is advertised as a remedy for rheumatism and erysipelas, and a preventive for typhoid.



country practitioner and chairman of the local Board of Health, being puzzled by an extremely bad skin disease among the negroes, and preferring to err on the side of safety, made a diagnosis of small-pox, and only by an attempt to segregate his patients discovered that he was confronted merely by the advanced stages of neglected ivy poisoning. This is a recognized difficulty in diagnosis, and Dr. Gilchrist, the specialist in skin diseases at the dispensary of the Johns Hopkins Hospital, strictly warns the medical students against the similarity of appearance in the two cases and the frequency of this mistake.

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## HYGIENE OF THE HOUSEHOLD

By EVELEEN HARRISON

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(Continued from page 590)

ONE of the most important points to be considered during our hot summer months is how to keep cool. As this question has more or less an effect on our health both mentally and physically, allow me to give a few suggestions to the "home-makers" who for various reasons have to face the prospect of summer spent in their city homes.

I will illustrate by the case of a family who decided one summer that it would be impossible for them to look forward to their usual trip to the sea-shore, and the daughters, with a view to making the best of their disappointment, took up the bright idea of bringing a little of the country into their city home by dressing up the house in summer attire.

All heavy draperies were put away, as usual for the hot weather, but instead of "shrouding the rooms in brown holland and gloom," slip-covers were made of dainty French cretonne, the design being quantities of green leaves and violets strewn on a white ground. Even the lounge- and sofa-pillows were treated to slip-covers, so that the rooms had a cool, fresh appearance, which was further enhanced by simple, white dotted Swiss curtains floating airily at all the windows, relieved by a background of olive-green shades and easily moved awnings to soften the mid-day glare.

Flowers the girls declared they could not live without, so deep, broad boxes were fitted to the windows, also on the top of a tiny balcony leading out from the parlor window; and one of the daughters undertook the entire care of their "summer garden," for the boxes were filled with all varieties of sweet-scented flowers, and the windows framed with sweet peas, wild-cucumber vine, and clematis, filling the rooms with fra-